C 8700-1

telephony

INTERNATIONAL ISSUE

FEBRUARY 22, 1982

THE JOURNAL OF TELECOMMUNICATIONS SINCE 1901

TOP NEWS: MCI, Texas Independent sign access agreement, p.11
British Telecom announces breakthrough in FO transmission, p.11
DOJ clarifies terms of proposed settlement with AT&T, p.12

INTERNATIONAL SECTION: News, features from around the world, p.55
Cover: Pacific Northwest Bell installs a 'landmark' underwater FO cable, p.30

FEBRUARY 22, 1982
VOLUME 202
NO. 8

telephony

(ISSN 0040-2656)

News of the Week 11
MCI, Sugar Land Tel reach interconnection agreement • British Telecom tells FO transmission advance • CICA meeting focuses on rates, BOC future

DOJ clarifies terms of consent decree 12
In the Nation's Capital: FCC challenges Congress over use of lotteries • Washington Round-Up
Victor Block

Newfoundland Tel gets $6.7 million rate hike 22
Courts and Commissions: CNCP Telecom receives rate increase of $26.5 million

A theme for the times 29
As We See It: AT&T quality theme is one that every telecommunications supplier should apply

COVER STORY: Underwater FO installation 30
Two underwater FO cables span Lake Washington to provide digital transmission for PNB
R.A. Greulich and R.K. Lux

Facility recovery: a necessary but expensive job 40
Two devices help telephone companies keep this expensive procedure under control
Karl O. Engelmann

PTC '82 attracts top leaders from the Pacific 46
The PTC is becoming crucial to telecom development in the Pacific area
Del Myers

55 **INTERNATIONAL SECTION**
International News begins on p. 57: Ireland inaugurates CIT-Alcatel digital system

74 **International telecom spending slows down**
Non-U.S. telecom spending hovers at $52 billion; economic conditions cited as major factors
Dan S. Fargo

91 **Exclusive interview with Dick Bradberry**
Dick Bradberry of Philips Business Systems tells what criteria telecom users should use when deciding to adopt new technologies

101 **Brazil nationalizes two telecom giants**
In an amazing feat, Brazil has nationalized Standard Electrica S.A. and NEC do Brazil
Wilson Moherdaui

104 **A user looks at telecommunications in India**
The author fears that India may never be able to catch up to world telecom standards
Ramesh R. Verma

106 **Comunicaciones Expo '82 preview**
Comunicaciones Expo '82 will focus on the growing Latin American telecom market, April 25-28 in Miami Beach, Fla.

109 **Communications '82 is ready to go**
Communications '82 promises to be the key event in the U.K.'s Information Technology Year
R.J. Raggett

DEPARTMENTS

Advertisers' Index **156**
Challenge and Response **158**
Courts and Commissions **22**
Helpful Literature **122**
In the Nation's Capital **12**
International Meetings **73**
International News **57**

9 Meetings
138 Moving Around Industry
125 New Books/Audio Visuals
112 New Products
11 News of the Week
110 Plant Man's Notebook
37 Reader Service Card

Published weekly* by TELEPHONY PUBLISHING CORP.,
55 E. Jackson, Chicago, IL 60604
Telephone 312/922-2435; TWX 910 221 1058

European Bureau, 136 Broomfield Rd., Chelmsford, Essex CM1 1RN, England;
Telephone Chelmsford (0245) 58257;
Telex 95801 GLOTLX-G.

*Except twice weekly the 2nd week of September and three times during the month of December. Officers of Telephony Publishing Corp. are Dan S. Fargo, President; H.D. Fargo, Jr., Vice President & Treasurer; Leo Anderson and Ed Robinson, Vice Presidents. Postmaster: Please send form 3579 to Subscription Dept., TELEPHONY, 55 E. Jackson Blvd., Chicago IL 60604.
Second class postage paid at Chicago, Ill., and at additional mailing offices. Single copies (payable in advance) U.S. $3.00 ea., issues over 2 years old $3.50 ea. Outside U.S. add $1.00 ea.

Subscriptions: $26 one year. Outside U.S. add $19 per year. Subscription rates apply to employes of operating telephone companies; telephone consultants, contractors, interconnect co's, specialized common carriers; military govt assn's; private communications users; schools, libraries. All others $32 one year. Outside U.S. add $19 per year. Change of address: include old address as well as new address. Attach issue label if possible. Allow 4 weeks for change to become effective.

Copyright 1982 by Telephony Publishing Corp.

Non-U.S. telecom spending hovers at $52 billion, a slight increase

DAN S. FARGO, PRESIDENT

International telecom spending slows down

THOUGH THE WORLD economy is forecast by many analysts to be about to recover from recent doldrums, still respondents to our survey of world-outside-the-U.S. telecommunications plant construction plans trimmed their estimates of a year ago by as much as 23%.

Extrapolating the returns from 98 telecommunications entities from around the world results in a 1982 spending amount of $52.536 billion, down from the $62.95 billion foreseen last year. Add in the U.S. Bell and Independent telcos' $24.624 billion and the world 1982 total is $77.16 billion (Table 1).

Recession

Difficult world economic conditions—recession, inflation, high interest rates, and an uncertain world balance of power being the major factors—led to stretching out, or canceling some PTT (national post, telephone and telegraph administrations) spending plans.

Other changes from last year's article (TELEPHONY, Feb. 23, 1981, p. 51): 1980 spending revised down from $52.779 billion to $43.153; and 1981, which was $60.141 billion, is now $46.259 billion. An early estimate of 1983 spending is $53.519 billion, but is based on reports of PTTs representing only 42.42% of non-U.S. telephones as of Dec. 31, 1981. Both that and the 1982 estimate are based on really too narrow a base for dependable extrapolation ('82 involved 44.67% of non-U.S. phones). The base narrowed, even for 1982, for several reasons: 1) because large PTTs like those in Japan and France continued to be cautious about advancing estimates for the upcoming year; 2) the result of opening up the telecom market in the United Kingdom led to sufficient uncertainty about the figures, even for 1981, that British Telecom did not venture an estimate beyond 1980; and 3) the unsettling world conditions listed above undoubtedly affected willingness to predict future expansion. At least for 1980 we had 71.94% of non-U.S. phones reporting, and for 1981 data, 63.45%.

Our extrapolation assumes construction expenditures in non-reporting nations were in the same proportion to telephones in place at the end of 1981 as those in reporting nations (see Table 2 on pp. 78, 79, 80, 81, 84 and 85). Another calculation assumption we made is that for a Dec. 31, 1981, non-U.S. telephone total. For this, we begin with Dec. 31, 1979, total of 296,601,000, reported in the World's Telephones, published by AT&T Long Lines, Overseas Administration, Morris

Continued on page 86

Table 1

Annual telecommunication construction spending ($ billions)

	World outside U.S.	Increase	United States	Increase	World Total	Increase
1975	23.837	—	11.947	—	35.784	—
1976	25.450	6.8%	12.525	4.8%	37.975	6.1%
1977	32.140	26.3	14.590	16.5	46.730	23.1
1978	33.138	3.1	17.422	19.4	50.560	8.2
1979	42.847	29.3	20.255	16.3	63.102	24.8
1980	43.153	0.7	22.049	8.9	65.202	3.3
1981	46.259E	7.2E	23.169E	5.1E	69.428E	6.5E
1982	52.536E	13.6E	24.624E	6.3E	77.160E	11.1E

E = Estimated

Table 2 World Telephone Totals

	Estimated population 12/31/81 of serving area	Total telephones 12/31/81 (est.)	Total telecom plant gross investment (in $ U.S. est.) (12/31/81)	Est. 1981 Domestic telecom service revenues (in $ U.S.)
World Zone 1				
Anguilla	6,519	350	n/a	n/a
Bahamas				
Bahamas Telecommunications Corp.	209,505	74,000	9,966,000	11,100,000
Grand Bahama Tel. Co. Ltd.	23,000	15,410	11,600,000	3,029,400
Barbados	249,500	66,627	66,202,500	9,907,500
Bermuda	55,240	48,140	39,472,000	11,825,000
British Virgin Islands	n/a	1,870	n/a	n/a
Canada				
Edmonton (Alta.) Tels.	522,000	516,000	455,710,000	136,370,000
Northern Telephone Ltd., New Liskeard, Ont.	134,200	76,104	57,701,675	17,971,776
Ontario Northland	5,000	2,334	40,660,000	23,250,000
Quebec-Telephone, Rimouski	533,024	283,537	330,310,000	42,324,494
Telebec Ltd., Montreal	300,000	169,075	175,619,127	60,577,181
Thunder Bay (Ont.) Tel. System	122,400	98,737	50,491,000	14,175,000
TransCanada Telephone System:				
Alberta Government Tels.	n/a	1,298,730[14]	n/a	n/a
Bell Canada	n/a	9,548,053	10,730,888,220	894,392,000
British Columbia Tel. Co.	2,716,301	1,977,000	2,549,925,000	471,120,000
Island Tel. Co., Ltd.	n/a	71,350[14]	n/a	24,453,000
Manitoba Tel. System	n/a	706,066	765,754,000	221,073,000
Maritime Tel. & Tel. Co.	n/a	498,239	589,591,932	207,302,000
New Brunswick Tel. Co.	n/a	391,878	494,571,678	176,513,303
Newfoundland Tel. Co.	n/a	201,835	289,328,687	98,295,416
Saskatchewan Tels.	n/a	623,275	834,805,000	267,600,000
Dominica	74,000	2,589	2,418,000	1,297,000
Dominican Republic	2,300,000	167,000	146,000,000	20,000
Jamaica	2,200,000	120,350	250,000,000	40,000,000
Montserrat	n/a	1,650	n/a	n/a
Puerto Rico Communications Authority	450,000	72,200	75,000,000	9,000,000
Puerto Rico Tel. Co.	3,152,640	679,458	977,253,000	242,948,000
St. Lucia	n/a	4,900	n/a	n/a
St. Vincent	n/a	3,700	n/a	n/a
Trinidad & Tobago	1,750,000	44,987	149,954,546	10,549,587
United States—Bell plus Independents	228,326,000	182,807,000	185,491,000,000	69,209,000,000
Virgin Islands Tel. Corp.	95,930	44,285	71,803,000	24,370,000
World Zone 2				
Ascension Island	n/a	240	n/a	n/a
Botswana	936,600	14,600	n/a	n/a
Egypt	44,000,000	527,800	203,476,000	48,491,000
Kenya	16,000,000	196,000	n/a	n/a
Seychelles	64,000	3,850	n/a	n/a
South Africa	24,743,218	3,138,400	2,563,113,000	n/a

(Arranged according to the International Telephone World Numbering Zone Plan, recommended by CCITT (International Telegraph and Telephone Consultative Committee, which is a part of ITU in Geneva, SW))

Est. 1981 international telecom service revenues (in $ U.S.)	Est. total employes 12/31/81	Actual 1980 construction expenditures (in $ U.S.)	Budgeted or estimated construction expenditures (in $ U.S.) 1981	1982	1983
n/a	n/a	n/a	n/a	n/a	n/a
29,000,000	1,369	16,619,000	9,966,000	23,220,400	n/a
730,600	82	1,869,000	1,767,000	1,648,000	1,094,000
5,365,000	650	8,222,200	8,000,000	10,000,000	8,300,000
6,600,000	460	4,978,000	4,535,000	14,300,000	5,247,000
n/a	n/a	n/a	n/a	n/a	n/a
n/a[1]	1,877	58,448,000	80,205,000	94,800,000	131,394,000
n/a[1]	314	7,004,000	6,792,000	7,611,000	6,735,000
750,000	165	3,000,000	4,100,000	4,800,000	6,800,000
76,263,579	2,187	36,447,000	38,480,000	39,458,000	42,738,000
n/a[1]	1,067	21,856,783	29,364,092	33,003,353	37,989,092
n/a	221	6,979,358	6,723,200	4,796,200	6,873,300
n/a	n/a	282,200,000[14]	324,530,000[14]	373,210,000[14]	384,400,000[14]
n/a	56,426	1,297,000,000	1,413,400,000	1,624,600,000	1,669,600,000
n/a[1]	14,400	318,900,000	371,436,000	n/a	n/a
n/a[1]	300	9,178,000	8,500,000	n/a	n/a
n/a	4,209	75,245,000	82,741,000	91,217,000	n/a
n/a	3,578	61,800,000	84,070,000	75,000,000	95,000,000
n/a[1]	2,776	40,421,000	52,500,000	65,000,000	65,000,000
n/a	1,431	32,800,000	35,000,000	38,500,000	42,600,000
n/a[1]	4,339	132,500,000	143,400,000	158,200,000	n/a
782,000	111	n/a	316,000	n/a	n/a
38,000,000	1,900	15,815,294	16,050,000	21,000,000	23,000,000
12,000,000	1,950	12,100,000	17,000,000	19,300,000	20,100,000
n/a	n/a	n/a	n/a	n/a	n/a
14,000,000	921	10,000,000	15,000,000	19,000,000	19,000,000
8,458,000	6,192	122,589,000	113,500,000	109,300,000	113,600,000
n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a
3,161,157	2,697	59,201,396	45,635,950	59,896,231	n/a
n/a[3]	1,072,200	22,049,000,000	23,169,000,000	24,624,000,000	n/a
1,653,000	449	5,514,000	7,667,000	8,420,000	9,950,000
n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a
56,098,000	57,267	146,482,000	203,476,000	285,713,000	357,141,000
n/a	5,899	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a
843,485,000[3]	n/a	368,182,000	502,300,000	648,209,000	702,086,000

Table 2 World Telephone Totals (continued)

	Estimated population 12/31/81 of serving area	Total telephones 12/31/81 (est.)	Total telecom plant gross investment (in $ U.S. est.) (12/31/81)	Est. 1981 Domestic telecom service revenues (in $ U.S.)
Zambia	5,600,000	60,500	126,000,000	31,104,000
Zimbabwe	7,600,000	224,452	111,592,109	57,241,278
World Zone 3 & 4				
Austria	7,559,000	3,200,000	2,935,927,000	n/a
Belgium	9,875,000	3,820,000	527,000,000	n/a
Cyprus	633,500	130,000	47,390,000	19,650,000
Denmark Telefontilsynet:				
Fyns	454,000	270,000	120,300,000	34,800,000
Jydsk	2,097,000	1,270,000	570,000	175,000
Ktas	2,315,000	1,780,000	555,400,000	213,500,000
Statstelefonen	n/a	142,300	328,905,000	134,723,000
Finland National Assoc. of Private Telephone Cos.	3,293,000	1,863,000	127,000,000	125,000,000
Posts & Telecommunications Administration	4,814,000	648,000	142,000,000	429,000,000
France	54,500,000	27,138,431	14,000,000,000	7,757,500,000
Germany, Federal Republic of	61,700,000	29,890,000	4,680,851,060	10,440,425,530
Greece	9,776,000	2,944,600	1,274,999,000	311,353,590
Guernsey-Channel Islands	56,000	38,700	18,800,000	6,500,000
Hungary	10,713,000	1,289,676	n/a	n/a
Iceland	231,500	114,000	215,000,000	28,700,000
Ireland	3,400,000	715,000	n/a	356,160,000
Italy SIP	57,296,000	20,453,000	13,170,000,000	3,920,000,000
Jersey-Channel Islands	76,080	55,400	31,750,000	12,141,000
Liechtenstein	26,000	21,437	2,600,000	n/a
Malta	346,000	90,000	52,300,000	4,870,000
Norway	4,105,000	2,000,000	457,729,250	781,106,300
Spain	37,900,000	12,469,474	15,869,672,100	1,823,029,000
Sweden	8,324,000	6,832,000	5,743,600,000	1,939,600,000
Switzerland	6,380,000	4,770,000	7,744,000,000[4]	n/a[3]
United Kingdom British Telecom	55,672,000[5]	28,632,000[6]	25,445,900,000	10,208,620,000
City of Kingston upon Hull Telephone Dept.	374,626	177,121	52,850,000	22,700,000
World Zone 5				
Argentina	27,862,771	2,224,199	n/a	499,342,830
Brazil Telebras	119,356,742	8,084,980	182,985,800	155,570,400
Chile	11,390,190	590,157[8]	1,349,600,000	188,200,000
Colombia Empresas Publicas de Medellin	2,140,749	236,000	n/a	20,760,000
Costa Rica	2,335,732	234,844	246,000,000	20,478,771
Guatemala	7,200,000	86,318	154,917,367	24,049,628

Est. 1981 international telecom service revenues (in $ U.S.)	Est. total employes 12/31/81	Actual 1980 construction expenditures (in $ U.S.)	Budgeted or estimated construction expenditures (in $ U.S.) 1981	1982	1983
19,865,000	4,000	18,436,400	16,000,000	29,000,000	50,000,000
12,227,332	2,796	11,424,053[2]	71,156,567	45,033,520	61,097,509
1,114,725,000[3]	56,332	483,800,000	570,300,000	576,200,000	582,700,000
1,278,000,000[3]	28,778	536,000,000	527,000,000	527,000,000	600,000,000
21,750,000	1,550	10,296,000	48,035,000	42,100,000	51,700,000
n/a	970	18,900,000	20,800,000	17,300,000	19,900,000
n/a	4,480	94,846,000	82,450,000	87,000,000	102,300,000
0	7,300	86,016,000	90,915,000	106,011,000	124,582,000
72,620,000	3,651	71,240,000	70,007,000	73,385,000	77,000,000
n/a	8,100	125,030,000	127,000,000	150,000,000	170,000,000
46,000,000	12,290	142,000,000	120,000,000	123,000,000	127,000,000
n/a	159,563	n/a	n/a	n/a	n/a
808,510,638	470,000	3,511,489,361	3,973,617,000	4,335,319,100	4,070,212,700
120,510,630	31,844	154,938,021	244,246,630	354,609,920	n/a
200,000	224	2,393,000	2,981,000	7,028,000	3,453,000
n/a	n/a	n/a	n/a	n/a	n/a
4,650,000	2,143	4,870,000	6,580,000	11,840,000	n/a
n/a[1]	17,000	198,840,000	352,660,000	n/a	n/a
n/a	73,000	2,098,000,000	1,808,000,000	2,174,000,000	2,275,000,000
2,298,000	309	2,683,000	7,039,000	7,962,000	3,337,000
n/a	n/a	2,300,000	2,600,000	2,700,000	3,600,000
8,720,000	1,500	5,100,000	9,310,000	10,540,000	n/a
128,303,900	22,300	476,330,825	443,144,600	460,157,200	460,157,200
272,406,000	60,713	1,476,718,000	1,400,207,270	1,317,427,370	1,317,427,370
n/a[1]	44,000	835,900,000	759,200,000	791,700,000	776,700,000
1,812,000,000	16,255	499,000,000	511,000,000	566,000,000	615,000,000
2,083,980,000	248,900	3,373,000,000[7]	n/a	n/a	n/a
n/a	674	7,680,000	9,740,000	13,020,000	15,480,000
44,433,962	45,761	884,298,200	824,752,000	389,201,414	n/a
27,415,400	99,965	835,500,000[13]	1,241,934,000	1,344,195,000	1,359,409,000
3,300,000	7,043	35,000,000	71,000,000	82,000,000	86,300,000
640,000	1,000	17,470,000	12,090,000	31,230,000	23,360,000
17,371,134	2,626	27,134,200	38,997,200	62,204,200	28,734,700
23,901,519	3,645	10,887,077	22,834,940	21,063,171	60,561,710

Table 2 continued on page 84

Table 2 World Telephone Totals (continued)

	Estimated population 12/31/81 of serving area	Total telephones 12/31/81 (est.)	Total telecom plant gross investment (in $ U.S. est.) (12/31/81)	Est. 1981 Domestic telecom service revenues (in $ U.S.)
Mexico				
Telefonos de Mexico	71,649,000	5,275,269	3,427,000,000	824,300,000
Panama	1,882,700	184,923	134,973,900	14,813,200
Venezuela	14,602,000	928,840	2,185,000,000	531,000,000
World Zone 6				
Australia	14,845,700	7,684,336	13,881,400,000	2,912,100,000
Brunei	194,600	21,900	54,149,000	4,600,000
Cocos (Keeling) Islands	230	150	n/a	n/a
Fiji	649,200	46,500	56,102,493	11,229,000
Guam	105,821	27,574	40,806,005	5,430,021
Malaysia	12,533,188	716,810	1,132,060,000	164,738,000
New Zealand	3,175,737	1,798,727[9]	548,732,722	458,243,565
Norfolk Island	1,800	826	235,000	58,500
Papua New Guinea	3,006,799	53,000	94,000,000	33,000,000
Philippines				
Philippine Long Distance Tel. Co.	13,931,576	672,962	544,569,725	95,547,719
Pitcairn Island	63	25	n/a	n/a
Singapore	2,434,000	775,113	727,003,000	106,795,000
Thailand	47,806,000[11]	537,000	431,700,000	129,600,000
World Zone 8 & 9				
Hong Kong	5,214,000	1,823,000	724,623,712	205,095,044
Israel	3,921,770	1,276,800[12]	2,510,000	290,000,000
Japan	117,890,000	58,332,000	39,320,000,000	17,041,000,000
Kuwait	1,510,000	231,643	334,000,000	66,030,000
Macau	330,000	15,680[12]	9,000,000	2,350,000
Saudi Arabia	n/a	788,576	n/a	n/a
Syrian Arab Republic	9,274,000	354,800	444,304,000	73,924,000
Taiwan	18,202,000	3,828,000	2,928,063,000	560,204,000
Turkey	46,000,000	2,140,285	175,000,000	212,000,000
United Arab Emirates	1,064,000	240,000	339,000,000	149,000,000

Table 2 Footnotes

[1]International telecommunication revenues in this instance—and others in this table—are grouped with the domestic revenues.
[2]Fiscal year ending June 30, 1981.
[3]Domestic revenues included with international.
[4]Not including land and buildings.
[5]As of March 31, 1982 (est.).
[6]Excludes from here on the City of Hull which provides its own local service.
[7]Fiscal year 4/1/80 to 3/31/81.
[8]Of this total, 571,115 are Chiltelco and 19,042 are for other telcos.

Est. 1981 international telecom service revenues (In $ U.S.)	Est. total employes 12/31/81	Actual 1980 construction expenditures (In $ U.S.)	Budgeted or estimated construction expenditures (In $ U.S.) 1981	1982	1983
379,200,000	27,568	361,530,000	552,890,000	947,930,000	1,241,060,000
18,874,900	3,255	14,416,500	26,930,000	30,091,000	33,274,700
129,000,000	1,800	121,830,000	204,830,000	463,410,000	547,830,000
85,800,000	89,992	1,361,500,000	1,477,800,000	1,548,600,000	1,603,000,000
3,000,000	600	10,088,000	9,702,000	n/a	n/a
n/a	4	n/a	n/a	n/a	n/a
3,733,500	1,450	4,364,495	5,941,680	6,385,140	n/a
2,613,823	236	14,958,177	2,264,789	8,900,000	8,100,000
74,229,000	35,423	259,675,000	201,462,000	314,707,000	n/a
43,187,121	25,407	72,321,600	103,475,520	138,709,120	161,240,080
97,000	7	14,000	28,500	40,500	n/a
4,000,000	2,889	15,731,050	21,001,220	28,784,400	36,946,500
55,769,667	12,000	162,280,000	227,648,000[10]	n/a	n/a
n/a	2	n/a	n/a	n/a	n/a
201,003,000	10,464	107,700,000	142,107,000	218,820,000	256,460,000
n/a	11,300	46,004,000	38,043,000	137,770,000	338,607,000
139,841,594	11,943	82,759,000	151,101,000	218,867,000	186,330,000
150,000,000	8,230	170,000,000	167,000,000	n/a	n/a
720,000,000	n/a	7,865,000,000[7]	7,695,000,000	n/a	n/a
109,501,000	7,500	108,465,000	105,700,000	n/a	n/a
4,000,000	275	n/a	n/a	15,000,000	22,500,000
n/a	14,189	n/a	n/a	n/a	n/a
7,089,000	11,978	68,098,000	70,127,000	100,397,000	112,152,000
149,186,000	29,510	652,986,655	758,526,000	866,651,000	909,109,000
15,000,000	n/a	127,333,333	175,000,000	230,000,000	323,000,000
96,000,000	4,375	76,000,000	102,000,000	103,000,000	108,000,000

Table 2 Footnotes

[9]New Zealand statistics are as of 3/31/81 and parallel fiscal years.
[10]With acquisition of Republic Tel. Co. 2/14/81 this amount would be $113,227,000 higher.
[11]Thailand data as of 9/30/80.
[12]Telephones data submitted for last year's survey used, plus estimated 6.4% growth.
[13]TELEPHONY estimate (same amount as Telebras estimated for 1980 in last year's survey).
[14]TELEPHONY estimate.

Continued from page 74

Plains, N.J., U.S., June 1981. We estimated 6.8% growth in their total for 1980, and a bit slower growth, 6.4%, in 1981, resulting in an estimated 337,043,000 phones at year-end 1981. Combine this amount with the U.S. estimated total and we see the world has access to about 520,210,000 phones.

The top 10 construction spenders outside the U.S. reporting to TELEPHONY for 1982 are (expressed in billions of U.S. dollars): West Germany, 4.335; Italy (SIP), 2.174; Telebras (Brazil), 1.844; Bell Canada, 1.625; Australia, 1.549; Spain, 1.317; Telefonos de Mexico, 0.948; Taiwan, 0.867; Sweden, 0.792; and South Africa, 0.648. Others we either did not receive 1982 spending estimates for or from which we did not hear, but which from past reports we could expect to be among the leaders, include (amounts in billions of U.S. dollars): Japan, 7.7 (1981); France 5.6 (1980); United Kingdom, 3.4 (1980); Republic of Korea, 1.702 (1981); and the Netherlands, 0.4965 (1979).

News or articles appearing at various times in the past year have included plans not reported for this survey; among them: an article on India's expectation of adding 1.73 million phones in its sixth 5-year plan (TELEPHONY, Jan. 25, p. 73); news of the PTT of Surinam placing a $14.5 million order; and The Congo ordering $21.2 million worth of telephone, radio and television equipment. Other spending plans from non-reporting countries appear on occasion in exhibition publicity; for example, pre-show information on CommunicAsia 81 carried the plans of non-reporting Indonesia, as well as countries such as Malaysia, Singapore, the Philippines and Thailand, which did report (TELEPHONY, October 19, 1981, p. 78). Again, the show report can also be a rich lode of market perspective, as was the CommunicAsia followup (TELEPHONY, Jan. 25, p. 64). It reported Singapore PTT thinking, Philippine and Brunei forward looks, plus exhibitor highlights, and concluded with a sobering thought: "There will be many changes in the telecommunications scene by then [January 1984, occasion of the next CommunicAsia], and although Western industry appears to be holding ground against its Japanese rivals in these markets, as one senior official from a local administration commented, "what will happen when Casio or Sanyo start mass-producing digital PABXs [private automatic branch exchanges] in the way they now produce electronic games and calculators?"

Two other prime examples of the considerable amount of market information available in reports of meetings are those on the International Switching Symposium in Montreal in September 1981 and Sviaz in Moscow, also in September—and both conventions covered in the October 19, 1981, TELEPHONY in detail (pp. 64 and 72, respectively). If one could not attend, he or she could still derive a lot of benefit reading what went on and what was shown.

In Table 3 we see the specifics of what is AT&T's [American Telephone & Telegraph Co., New York] fastest growing business segment, and what in past spending surveys has been cited as one measure of how much the equipment installed with the construction dollars is used. One of the ways, incidentally, that Bell has handled this explosive growth is with four AT&T Long Lines international operating centers of the International Service Position System (TELEPHONY, July 20, 1981, p. 24).

One more perspective on the international market: as more and more countries open up to ownership and interconnection of private systems and equipment, the experience of the U.S., U.K., Canada and the rest in this emerging sector will no doubt prove helpful. Recently, for example, British Telecom chairman Sir George Jefferson stated: "If British suppliers are to maintain their position in our market, they will in future need to demonstrate that they can offer products that are internationally competitive in performance, styling, technology and price, since in the new competitive environment the products w[illegible] market will eventually be chosen from a worldwide range." The customer, he emphasized, is our first priority. And that would seem to be a top priority around the world, in view of the spending plans discussed here—which, though they were trimmed, as earlier pointed out, still rose 29.3% in 1979, and at least moderated at that fairly high level. □

Table 3

Overseas Telephone Service*

	Two way messages			Two way messages	
	Quantity	Growth %		Quantity	Growth %
1927	11,753	—	1953	1,440,317	5.6
1928	22,665	92.8%	1954	1,529,152	6.2
1929	30,323	33.8	1955	1,742,368	13.9
1930	33,821	8.2	1956	2,024,117	16.2
1931	33,253	1.3	1957	2,421,332	19.6
1932	27,971	(15.9)	1958	2,687,836	11.0
1933	30,195	8.0	1959	3,088,645	14.9
1934	26,665	(11.7)	1960	3,713,183	20.2
1935	28,059	5.2	1961	4,365,020	17.6
1936	48,429	72.6	1962	4,914,262	12.6
1937	75,010	54.9	1963	5,290,460	7.7
1938	75,058	0.1	1964	6,382,127	20.6
1939	76,189	1.5	1965	8,108,030	27.0
1940	73,429	(3.6)	1966	9,931,918	22.5
1941	116,680	58.9	1967	12,332,231	24.2
1942	135,196	15.9	1968	15,166,091	23.0
1943	153,799	13.8	1969	20,800,303	37.1
1944	173,799	12.8	1970	26,305,694	26.5
1945	360,341	107.8	1971	32,245,147	22.6
1946	631,665	75.3	1972	40,225,532	24.7
1947	664,273	5.2	1973	47,478,563	18.0
1948	797,531	20.1	1974	59,878,146	22.8
1949	852,865	6.9	1975	71,662,752	19.7
1950	1,000,184	17.3	1976	87,140,523	21.6
1951	1,263,362	26.3	1977	109,599,014	25.8
1952	1,363,775	7.9	1978	149,521,467	36.5
			1979	181,521,678	21.4
			1980	241,000,000	32.7
			1981	287,000,000	19.1

*Overseas in this context is defined as all calls to and from the 48 contiguous United States to all points outside these states, except to Canada and Mexico.

Source: AT&T Long Lines-Overseas Dept./Economic Research (Morris Plains, N.J.)